

```

> -----
name: <unnamed>
log: C:\Users\bomim\Dropbox\6TStriangles\fpa\data\lee-multiplerivals.log
log type: text
opened on: 7 Aug 2025, 13:23:09

```

```

. * Experimental analysis
. use "japancleaned2.dta", clear

```

```

. * Table 3
. ttest pmapplrecoded, by(polconf)

```

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
1	266	3.759398	.0533462	.8700499	3.654362	3.864435
2	260	3.326923	.0657609	1.060363	3.197429	3.456417
combined	526	3.545627	.0432437	.9917805	3.460675	3.630579
diff		.4324754	.0844889		.2664968	.598454

```

diff = mean(1) - mean(2)
Ho: diff = 0
degrees of freedom = 524
t = 5.1187

```

```

Ha: diff < 0
Pr(T < t) = 1.0000
Ha: diff != 0
Pr(|T| > |t|) = 0.0000
Ha: diff > 0
Pr(T > t) = 0.0000

```

```

. * Table 4
. ttest pmapplrecoded, by(polcoop)

```

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
1	265	3.377358	.0655129	1.066473	3.248364	3.506353
2	260	3.042308	.0636172	1.025796	2.917035	3.16758
combined	525	3.211429	.0462136	1.058888	3.120642	3.302215
diff		.3350508	.0913525		.155588	.5145136

```

diff = mean(1) - mean(2)
Ho: diff = 0
degrees of freedom = 523
t = 3.6677

```

```

Ha: diff < 0
Pr(T < t) = 0.9999
Ha: diff != 0
Pr(|T| > |t|) = 0.0003
Ha: diff > 0
Pr(T > t) = 0.0001

```

```

. * (Under Table 4) Competence ratings
. ttest pmcomplrecoded, by(polconf)

```

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
1	241	3.360996	.0599091	.9300389	3.242981	3.479011
2	228	3.350877	.0624626	.9431642	3.227797	3.473958
combined	469	3.356077	.0431953	.9354545	3.271196	3.440957
diff		.0101187	.086515		-.1598882	.1801255

```

diff = mean(1) - mean(2)
Ho: diff = 0
degrees of freedom = 467
t = 0.1170

```

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5465 Pr(|T| > |t|) = 0.9069 Pr(T > t) = 0.4535

. ttest pmcomplrecoded, by(polcoop)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
1	249	3.204819	.0621538	.9807712	3.082403	3.327236
2	236	3.072034	.0591098	.9080618	2.955581	3.188487
combined	485	3.140206	.0430214	.9474476	3.055674	3.224738
diff		.1327854	.0859506		-.036098	.3016687

diff = mean(1) - mean(2) t = 1.5449
Ho: diff = 0 degrees of freedom = 483

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9385 Pr(|T| > |t|) = 0.1230 Pr(T > t) = 0.0615

. * Table 5
. ** Model 1
. oprobit pmapplrecoded male college age fulltime cons ldp i.polconf

Iteration 0: log likelihood = -712.40759
Iteration 1: log likelihood = -658.12215
Iteration 2: log likelihood = -657.91195
Iteration 3: log likelihood = -657.91186
Iteration 4: log likelihood = -657.91186

Ordered probit regression Number of obs = 526
LR chi2(7) = 108.99
Prob > chi2 = 0.0000
Log likelihood = -657.91186 Pseudo R2 = 0.0765

pmapplrecoded	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
male	.1496807	.1018777	1.47	0.142	-.049996	.3493574
college	-.0300008	.0960758	-0.31	0.755	-.2183058	.1583042
age	.0023782	.0145414	0.16	0.870	-.0261225	.0308789
fulltime	-.2243977	.1046842	-2.14	0.032	-.429575	-.0192205
cons	.4657438	.0662051	7.03	0.000	.3359841	.5955034
ldp	.2873534	.1272573	2.26	0.024	.0379336	.5367732
2.polconf	-.4507947	.0959	-4.70	0.000	-.6387552	-.2628342
/cut1	-1.716619	.1772821			-2.064086	-1.369153
/cut2	-1.215189	.1624666			-1.533618	-.8967604
/cut3	-.052802	.1531755			-.3530205	.2474164
/cut4	1.250783	.1638314			.9296792	1.571886

. ** Model 2
. oprobit pmapplrecoded male college age fulltime cons ldp i.polcoop

Iteration 0: log likelihood = -744.74213
Iteration 1: log likelihood = -725.30998
Iteration 2: log likelihood = -725.29552
Iteration 3: log likelihood = -725.29551

Ordered probit regression Number of obs = 525
LR chi2(7) = 38.89
Prob > chi2 = 0.0000
Log likelihood = -725.29551 Pseudo R2 = 0.0261

pmapplrecoded	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
male	.049814	.0961456	0.52	0.604	-.1386278	.2382558
college	.0915355	.0952506	0.96	0.337	-.0951522	.2782232
age	.0008622	.0143696	0.06	0.952	-.0273016	.029026
fulltime	-.1132393	.1049035	-1.08	0.280	-.3188464	.0923679
cons	.1934663	.0627992	3.08	0.002	.0703822	.3165505
ldp	.2465613	.116841	2.11	0.035	.0175572	.4755654
2.polcoop	-.367275	.0933361	-3.93	0.000	-.5502105	-.1843395
/cut1	-1.346903	.1614575			-1.663354	-1.030452
/cut2	-.7644213	.1517776			-1.0619	-.4669426
/cut3	.1889283	.1477869			-.1007286	.4785852
/cut4	1.531923	.1658008			1.20696	1.856887

```
. ** Model 3
. oprobit pmcomplrecoded male college age fulltime cons ldp i.polconf
```

```
Iteration 0:  log likelihood = -613.79511
Iteration 1:  log likelihood = -573.96218
Iteration 2:  log likelihood = -573.85382
Iteration 3:  log likelihood = -573.8538
```

```
Ordered probit regression          Number of obs    =         469
                                LR chi2(7)            =          79.88
                                Prob > chi2          =          0.0000
Log likelihood = -573.8538        Pseudo R2        =          0.0651
```

pmcomplrecoded	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
male	.1479616	.1063987	1.39	0.164	-.0605761	.3564993
college	.0367058	.1009506	0.36	0.716	-.1611538	.2345653
age	-.0278735	.0156231	-1.78	0.074	-.0584943	.0027473
fulltime	-.185027	.109919	-1.68	0.092	-.4004643	.0304102
cons	.3955549	.0676445	5.85	0.000	.2629742	.5281356
ldp	.538101	.1305798	4.12	0.000	.2821693	.7940327
2.polconf	.0549334	.1002815	0.55	0.584	-.1416148	.2514817
/cut1	-1.608663	.188041			-1.977217	-1.240109
/cut2	-1.0224	.1740453			-1.363523	-.6812779
/cut3	.3983054	.169336			.0664129	.7301979
/cut4	1.635003	.1830359			1.276259	1.993746

```
. ** Model 4
. oprobit pmcomplrecoded male college age fulltime cons ldp i.polcoop
```

```
Iteration 0:  log likelihood = -633.32611
Iteration 1:  log likelihood = -621.99892
Iteration 2:  log likelihood = -621.99432
Iteration 3:  log likelihood = -621.99432
```

```
Ordered probit regression          Number of obs    =         485
                                LR chi2(7)            =          22.66
                                Prob > chi2          =          0.0020
Log likelihood = -621.99432        Pseudo R2        =          0.0179
```

pmcomplrecoded	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
male	.0424174	.1008769	0.42	0.674	-.1552976	.2401324
college	.2646056	.1006829	2.63	0.009	.0672708	.4619404
age	-.0439094	.0151417	-2.90	0.004	-.0735866	-.0142321
fulltime	-.188527	.1107713	-1.70	0.089	-.4056347	.0285806
cons	.0119126	.0646661	0.18	0.854	-.1148306	.1386558
ldp	.2711629	.1220072	2.22	0.026	.0320333	.5102925
2.polcoop	-.1740125	.0974575	-1.79	0.074	-.3650256	.0170006
/cut1	-1.722247	.1729294			-2.061183	-1.383312

```

/cut2 | -1.181493 .1628401 -1.500654 -.862332
/cut3 | .1753931 .1562513 -.1308538 .48164
/cut4 | 1.377049 .1717174 1.04049 1.713609
-----

```

```

. * Figure 2
. gen polconf2=.
(1,120 missing values generated)

. replace polconf2=0 if polconf==2
(280 real changes made)

. replace polconf2=1 if polconf==1
(280 real changes made)

.
. oprobit pmapplrecoded male college age fulltime cons ldp polconf2

```

```

Iteration 0: log likelihood = -712.40759
Iteration 1: log likelihood = -658.12215
Iteration 2: log likelihood = -657.91195
Iteration 3: log likelihood = -657.91186
Iteration 4: log likelihood = -657.91186

```

```

Ordered probit regression          Number of obs   =          526
LR chi2(7)                        =          108.99
Prob > chi2                       =           0.0000
Pseudo R2                         =           0.0765

Log likelihood = -657.91186

```

```

-----
pmapplrecoded |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      male |   .1496807   .1018777     1.47   0.142    - .049996   .3493574
     college |  -.0300008   .0960758    -0.31   0.755    - .2183058   .1583042
        age |   .0023782   .0145414     0.16   0.870    - .0261225   .0308789
    fulltime |  -.2243977   .1046842    -2.14   0.032    - .429575   -.0192205
        cons |   .4657438   .0662051     7.03   0.000     .3359841   .5955034
         ldp |   .2873534   .1272573     2.26   0.024     .0379336   .5367732
    polconf2 |   .4507947    .0959         4.70   0.000     .2628342   .6387552
-----+-----
      /cut1 |  -1.265824   .1701807    -1.599372  - .9322764
      /cut2 |  -.7643943   .1565276    -1.071183  - .4576058
      /cut3 |   .3979926   .1525909     .0989199   .6970653
      /cut4 |   1.701577   .1673168     1.373643   2.029512
-----

```

```

. margins, at(polconf2=(0(1)1)) vsquish saving(m1, replace)

```

```

Predictive margins          Number of obs   =          526
Model VCE      : OIM

```

```

1. _predict : Pr(pmapplrecoded==1), predict(pr outcome(1))
2. _predict : Pr(pmapplrecoded==2), predict(pr outcome(2))
3. _predict : Pr(pmapplrecoded==3), predict(pr outcome(3))
4. _predict : Pr(pmapplrecoded==4), predict(pr outcome(4))
5. _predict : Pr(pmapplrecoded==5), predict(pr outcome(5))
1. _at      : polconf2 = 0
2. _at      : polconf2 = 1

```

		Margin	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
_predict#_at							
1	1	.0704674	.0132406	5.32	0.000	.0445163	.0964186
1	2	.0288876	.0071898	4.02	0.000	.0147959	.0429794
2	1	.0873048	.0139704	6.25	0.000	.0599233	.1146863
2	2	.0482222	.0088996	5.42	0.000	.0307794	.065665
3	1	.3675342	.0231714	15.86	0.000	.322119	.4129493
3	2	.2871626	.0205078	14.00	0.000	.246968	.3273572
4	1	.3655464	.0219449	16.66	0.000	.3225351	.4085576
4	2	.4324067	.0230472	18.76	0.000	.387235	.4775784
5	1	.1091473	.0151677	7.20	0.000	.0794191	.1388754
5	2	.2033209	.0207115	9.82	0.000	.1627271	.2439146

```

.
. use m1.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter<3
(8 observations deleted)

. twoway (bar _margin counter, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub counter, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsize(small)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Strongly Disapprove)" "") ///
> graphregion(color(white)) ///
> title("Strongly Disapprove", size(medlarge)) ///
> legend(off) ///
> saving(m1_strdis.gph, replace)
(file m1_strdis.gph saved)

.
. use m1.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter==3 | counter==4
(8 observations deleted)

. twoway (bar _margin_at, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub_at, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsize(small)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Disapprove)" "") ///
> graphregion(color(white)) ///
> title("Disapprove", size(medlarge)) ///
> legend(off) ///
> saving(m1_dis.gph, replace)
(file m1_dis.gph saved)

.

```

```

. use m1.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter==7 | counter==8
(8 observations deleted)

.
. twoway (bar _margin_at, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub_at, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsz(sm)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Approve)" "") ///
> graphregion(color(white)) ///
> title("Approve", size(medlarge)) ///
> legend(off) ///
> saving(m1_appr.gph, replace)
(file m1_appr.gph saved)

.
. use m1.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter==9 | counter==10
(8 observations deleted)

.
. twoway (bar _margin_at, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub_at, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsz(sm)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Strongly Approve)" "") ///
> graphregion(color(white)) ///
> title("Strongly Approve", size(medlarge)) ///
> legend(off) ///
> saving(m1_strapp.gph, replace)
(file m1_strapp.gph saved)

.
. graph combine m1_strdis.gph m1_dis.gph m1_appr.gph m1_strapp.gph, col(4) ///
> subtitle("", size(medsmall)) ///
> graphregion(color(white)) ycommon imargin(0 0 0 0) ///
> note("Note: 95% Confidence Intervals reported.", size(sm)) ///
> saving(m1_total.gph, replace)
(file m1_total.gph saved)

.
. * Figure 3
. use "japancleaned2.dta", replace

.
. gen polcoop2=.
(1,120 missing values generated)

. replace polcoop2=0 if polcoop==2
(280 real changes made)

```

```
. replace polcoop2=1 if polcoop==1
(280 real changes made)
```

```
. oprobit pmapplrecoded male college age fulltime cons ldp polcoop2
```

```
Iteration 0: log likelihood = -744.74213
Iteration 1: log likelihood = -725.30998
Iteration 2: log likelihood = -725.29552
Iteration 3: log likelihood = -725.29551
```

```
Ordered probit regression                               Number of obs   =           525
LR chi2(7)                                             =           38.89
Prob > chi2                                           =           0.0000
Pseudo R2                                             =           0.0261
Log likelihood = -725.29551
```

pmapplrecoded	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
male	.049814	.0961456	0.52	0.604	-.1386278	.2382558
college	.0915355	.0952506	0.96	0.337	-.0951522	.2782232
age	.0008622	.0143696	0.06	0.952	-.0273016	.029026
fulltime	-.1132393	.1049035	-1.08	0.280	-.3188464	.0923679
cons	.1934663	.0627992	3.08	0.002	.0703822	.3165505
ldp	.2465613	.116841	2.11	0.035	.0175572	.4755654
polcoop2	.367275	.0933361	3.93	0.000	.1843395	.5502105
/cut1	-.9796283	.1624518			-1.298028	-.6612286
/cut2	-.3971463	.1533654			-.697737	-.0965556
/cut3	.5562033	.1521207			.2580523	.8543543
/cut4	1.899198	.1742075			1.557758	2.240638

```
. margins, at(polcoop2=(0(1)1)) vsquish saving(m2, replace)
```

```
Predictive margins                               Number of obs   =           525
Model VCE      : OIM
```

```
1. _predict   : Pr(pmapplrecoded==1), predict(pr outcome(1))
2. _predict   : Pr(pmapplrecoded==2), predict(pr outcome(2))
3. _predict   : Pr(pmapplrecoded==3), predict(pr outcome(3))
4. _predict   : Pr(pmapplrecoded==4), predict(pr outcome(4))
5. _predict   : Pr(pmapplrecoded==5), predict(pr outcome(5))
1. _at        : polcoop2           =           0
2. _at        : polcoop2           =           1
```

_predict#_at	Delta-method		z	P> z	[95% Conf. Interval]	
	Margin	Std. Err.				
1 1	.1193662	.0172523	6.92	0.000	.0855523	.1531802
1 2	.0620985	.0112073	5.54	0.000	.0401326	.0840643
2 1	.1518105	.0174377	8.71	0.000	.1176332	.1859879
2 2	.1044606	.0136444	7.66	0.000	.077718	.1312031
3 1	.354226	.0215762	16.42	0.000	.3119374	.3965145
3 2	.3183383	.0208734	15.25	0.000	.2774272	.3592495
4 1	.3224386	.0230387	14.00	0.000	.2772835	.3675936
4 2	.4126876	.0249404	16.55	0.000	.3638053	.46157
5 1	.0521587	.0102945	5.07	0.000	.0319819	.0723355
5 2	.102415	.0158499	6.46	0.000	.0713498	.1334802

```

.
. use m2.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter<3
(8 observations deleted)

. twoway (bar _margin counter, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub counter, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsize(small)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Strongly Disapprove)" "") ///
> graphregion(color(white)) ///
> title("Strongly Disapprove", size(medium)) ///
> legend(off) ///
> saving(m2_strdis.gph, replace)
(file m2_strdis.gph saved)

```

```

.
. use m2.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter==3 | counter==4
(8 observations deleted)

. twoway (bar _margin_at, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub_at, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsize(small)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Disapprove)" "") ///
> graphregion(color(white)) ///
> title("Disapprove", size(medium)) ///
> legend(off) ///
> saving(m2_dis.gph, replace)
(file m2_dis.gph saved)

```

```

.
. use m2.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter==7 | counter==8
(8 observations deleted)

. twoway (bar _margin_at, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub_at, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsize(small)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Approve)" "") ///
> graphregion(color(white)) ///
> title("Approve", size(medium)) ///
> legend(off) ///
> saving(m2_appr.gph, replace)
(file m2_appr.gph saved)

```

```

.
. use m2.dta, clear
(Created by command margins; also see char list)

. gen counter= _n

. keep if counter==9 | counter==10
(8 observations deleted)

.
. twoway (bar _margin_at, sort color(gs11) barw(.5)) ///
> (rcap _ci_lb _ci_ub_at, sort pstyle(ci) color(black) lw(medthick)), ///
> xlabel(1 "Lesser" 2 "Bigger", labsize(small)) ///
> ylabel(0(.1)0.5) ///
> xtitle("Threat Levels") ///
> ytitle("Pr(Strongly Approve)" "") ///
> graphregion(color(white)) ///
> title("Strongly Approve", size(medium)) ///
> legend(off) ///
> saving(m2_strapp.gph, replace)
(file m2_strapp.gph saved)

.
. graph combine m2_strdis.gph m2_dis.gph m2_appr.gph m2_strapp.gph, col(4) ///
> subtitle("", size(medsmall)) ///
> graphregion(color(white)) ycommon imargin(0 0 0 0) ///
> note("Note: 95% Confidence Intervals reported.", size(small)) ///
> saving(m2_total.gph, replace)
(file m2_total.gph saved)

.
.
. * Figure 4
. use "japancleaned2.dta", replace

.
. twoway hist statea if statea<6, title("State A") percent discrete start(1) saving(st
> atea.gph
> , replace)
(file statea.gph saved)

. twoway hist stateb if stateb<6, title("State B") percent discrete start(1) saving(st
> ateb.gph
> , replace)
(file stateb.gph saved)

. graph combine statea.gph stateb.gph, ///
> row(1) ycommon title("What countries do you think of?")

.
.
. * Observational analysis
. use jpappterr2014nomiss.dta, clear

.
. * Figure 5
. twoway line approval mdate, ///
> title("", size(medium)) ///
> ytitle("Approval Ratings") ///
> xtitle("Date (Monthly)")

```

```

. * Figure 6
. twoway line jcmo mdate, ///
> title("Japan to China", size(medium)) ///
> ytitle("Net-Cooperation") ///
> xtitle("Date (Monthly)") name(jcmo, replace)

. twoway line cjmo mdate, ///
> title("China to Japan", size(medium)) ///
> ytitle("Net-Cooperation") ///
> xtitle("Date (Monthly)") name(cjmo, replace)

. twoway line jkmo mdate, ///
> title("Japan to South Korea", size(medium)) ///
> ytitle("Net-Cooperation") ///
> xtitle("Date (Monthly)") name(jkmo, replace)

. twoway line kjmo mdate, ///
> title("South Korea to Japan", size(medium)) ///
> ytitle("Net-Cooperation") ///
> xtitle("Date (Monthly)") name(kjmo, replace)

. graph combine jcmo cjmo jkmo kjmo, t("") ycommon rows(2)

```

```

. * Table 6
. * Model 1
. regress approval L.approval jcmo cjmo unemployment cpi newcabinet

```

Source	SS	df	MS	Number of obs	=	203
Model	42821.9954	6	7136.99924	F(6, 196)	=	122.74
Residual	11396.9277	196	58.1475901	Prob > F	=	0.0000
				R-squared	=	0.7898
				Adj R-squared	=	0.7834
Total	54218.9231	202	268.41051	Root MSE	=	7.6255

approval	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
approval						
L1.	.888741	.0348601	25.49	0.000	.8199919	.9574902
jcmo	-.6576853	.3053948	-2.15	0.032	-1.259967	-.0554037
cjmo	.3092848	.3584806	0.86	0.389	-.3976895	1.016259
unemployment	1.653755	1.459274	1.13	0.258	-1.224139	4.531649
cpi	.4804799	.7474935	0.64	0.521	-.9936828	1.954643
newcabinet	32.81647	2.585303	12.69	0.000	27.71789	37.91505
_cons	-3.567736	6.752494	-0.53	0.598	-16.88461	9.749135

```

. estat ic

```

Akaike's information criterion and Bayesian information criterion

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	203	-855.1838	-696.8757	7	1407.751	1430.944

Note: N=Obs used in calculating BIC; see [R] BIC note.

```
. estimates store m1
. predict res1, residuals
(1 missing value generated)
. wntestq res1
```

Portmanteau test for white noise

```
-----
Portmanteau (Q) statistic =    37.4630
Prob > chi2(40)           =    0.5851
```

```
.
. * Model 2
. regress approval L.approval jcmo L.cjmo unemployment cpi newcabinet
```

```
-----
Source |          SS          df          MS      Number of obs      =          203
-----+-----
Model | 43033.8139           6   7172.30231      F(6, 196)           =          125.68
Residual | 11185.1092          196   57.0668839      Prob > F             =           0.0000
-----+-----
Total | 54218.9231          202   268.41051      R-squared            =           0.7937
Adj R-squared =           0.7874
Root MSE =           7.5543
```

```
-----
approval |          Coef.      Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
approval
L1. |      .8738058     .0343133     25.47  0.000     .8061351     .9414764
jcmo |     -0.5854833     .300077     -1.95  0.052     -1.177278     .006311
cjmo
L1. |     -0.7335649     .3469558     -2.11  0.036     -1.417811    -0.0493191
unemployment |      1.63742     1.445622      1.13  0.259     -1.21355     4.48839
cpi |      .4642226     .7405622      0.63  0.531     -0.9962706     1.924716
newcabinet |     32.75959     2.561289     12.79  0.000     27.70837     37.81081
_cons |    -2.889734     6.686737     -0.43  0.666     -16.07692     10.29746
-----
```

```
. estat ic
```

Akaike's information criterion and Bayesian information criterion

```
-----
Model |          Obs   ll(null)   ll(model)      df          AIC          BIC
-----+-----
. |          203 -855.1838  -694.9715         7   1403.943   1427.135
-----
```

Note: N=Obs used in calculating BIC; see [R] BIC note.

```
. estimates store m2
. predict res2, residuals
(1 missing value generated)
. wntestq res2
```

Portmanteau test for white noise

```
-----
Portmanteau (Q) statistic =    32.2901
Prob > chi2(40)           =    0.8020
```

```

. * Model 3
. regress approval L.approval jkmo kjmo unemployment cpi newcabinet

```

Source	SS	df	MS	Number of obs	=	203
Model	42665.2076	6	7110.86794	F(6, 196)	=	120.63
Residual	11553.7154	196	58.9475278	Prob > F	=	0.0000
				R-squared	=	0.7869
				Adj R-squared	=	0.7804
Total	54218.9231	202	268.41051	Root MSE	=	7.6777

approval	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
approval					
L1.	.8960653	.0345508	25.93	0.000	.8279263 .9642042
jkmo	-.3265295	.2187475	-1.49	0.137	-.7579305 .1048715
kjmo	.0166385	.2695544	0.06	0.951	-.5149609 .548238
unemployment	1.549689	1.475202	1.05	0.295	-1.359617 4.458996
cpi	.5493924	.7522293	0.73	0.466	-.93411 2.032895
newcabinet	33.85031	2.617107	12.93	0.000	28.689 39.01161
_cons	-3.415299	6.804537	-0.50	0.616	-16.83481 10.00421

```

. estat ic

```

Akaike's information criterion and Bayesian information criterion

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	203	-855.1838	-698.2625	7	1410.525	1433.717

Note: N=Obs used in calculating BIC; see [R] BIC note.

```

. estimates store m3

```

```

. predict res3, residuals
(1 missing value generated)

```

```

. wntestq res3

```

Portmanteau test for white noise

```

Portmanteau (Q) statistic = 37.7396
Prob > chi2(40) = 0.5725

```

```

. * Model 4
. regress approval L.approval jkmo L.kjmo unemployment cpi newcabinet

```

Source	SS	df	MS	Number of obs	=	203
Model	42678.2704	6	7113.04507	F(6, 196)	=	120.80
Residual	11540.6527	196	58.8808811	Prob > F	=	0.0000
				R-squared	=	0.7871
				Adj R-squared	=	0.7806
Total	54218.9231	202	268.41051	Root MSE	=	7.6734

approval	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
approval					
L1.	.8936945	.0345458	25.87	0.000	.8255654 .9618237
jkmo	-.3197883	.2190912	-1.46	0.146	-.7518671 .1122905
kjmo					
L1.	-.129638	.272898	-0.48	0.635	-.6678314 .4085553
unemployment	1.579558	1.467887	1.08	0.283	-1.315322 4.474437
cpi	.5181703	.7545429	0.69	0.493	-.9698949 2.006235

```
newcabinet | 33.59835 2.665155 12.61 0.000 28.34229 38.85442
_cons | -3.402109 6.789246 -0.50 0.617 -16.79146 9.987243
```

```
-----
. estat ic
```

Akaike's information criterion and Bayesian information criterion

```
-----
Model | Obs ll(null) ll(model) df AIC BIC
-----+-----
. | 203 -855.1838 -698.1477 7 1410.295 1433.488
-----
```

Note: N=Obs used in calculating BIC; see [R] BIC note.

```
. estimates store m4
```

```
. predict res4, residuals
(1 missing value generated)
```

```
. wntestq res4
```

Portmanteau test for white noise

```
-----
Portmanteau (Q) statistic = 37.3945
Prob > chi2(40) = 0.5882
```

```
. log close
name: <unnamed>
log: C:\Users\bomim\Dropbox\6TStriangles\fpa\data\lee-multiplerivals.log
log type: text
closed on: 7 Aug 2025, 13:23:38
```

```
-----
> -----
```